

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID: ssspta1202jxp

PASSWORD :

TERMINAL (ENTER 1, 2, 3, OR ?):2

NEWS 1	Web Page for STN Seminar Schedule - N. America	
NEWS 2	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS 3	AUG 06	FSTA enhanced with new thesaurus edition
NEWS 4	AUG 13	CA/CAplus enhanced with additional kind codes for granted patents
NEWS 5	AUG 20	CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS 6	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS 7	AUG 27	USPATOLD now available on STN
NEWS 8	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS 9	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS 10	SEP 13	FORIS renamed to SOFIS
NEWS 11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS 12	SEP 17	CA/CAplus enhanced with printed CA page images from 1967-1998
NEWS 13	SEP 17	CAplus coverage extended to include traditional medicine patents
NEWS 14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS 15	OCT 02	CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS 16	OCT 19	BEILSTEIN updated with new compounds
NEWS 17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS 18	NOV 19	WPIX enhanced with XML display format
NEWS 19	NOV 30	ICSD reloaded with enhancements
NEWS 20	DEC 04	LINPADOCDB now available on STN
NEWS 21	DEC 14	BEILSTEIN pricing structure to change
NEWS 22	DEC 17	USPATOLD added to additional database clusters
NEWS 23	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS 24	DEC 17	DGENE now includes more than 10 million sequences
NEWS 25	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 26	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 27	DEC 17	CA/CAplus enhanced with new custom IPC display formats
NEWS 28	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS 29	JAN 02	STN pricing information for 2008 now available
NEWS 30	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS EXPRESS	19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.	
NEWS HOURS	STN Operating Hours Plus Help Desk Availability	
NEWS LOGIN	Welcome Banner and News Items	
NEWS IPC8	For general information regarding STN implementation of IPC 8	

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 11:43:09 ON 21 JAN 2008

FILE 'CAPLUS' ENTERED AT 11:43:29 ON 21 JAN 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 21 Jan 2008 VOL 148 ISS 4
FILE LAST UPDATED: 20 Jan 2008 (20080120/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

```
=> s (off (1a) vapor) (s) dryer (p) (residual gas or tail gas) (p) gasif?  
353014 OFF  
2945 OFFS  
355375 OFF  
          (OFF OR OFFS)  
553387 VAPOR  
73548 VAPORS  
596621 VAPOR  
          (VAPOR OR VAPORS)  
14223 DRYER  
3244 DRYERS  
15793 DRYER  
          (DRYER OR DRYERS)  
272636 RESIDUAL  
6439 RESIDUALS  
277569 RESIDUAL  
          (RESIDUAL OR RESIDUALS)  
1640826 GAS  
542334 GASES  
1830903 GAS  
          (GAS OR GASES)
```

7249 RESIDUAL GAS
 (RESIDUAL (W) GAS)
 71573 TAIL
 13578 TAILS
 81501 TAIL
 (TAIL OR TAILS)
 1640826 GAS
 542334 GASES
 1830903 GAS
 (GAS OR GASES)
 2258 TAIL GAS
 (TAIL (W) GAS)
 42433 GASIF?
 L1 0 (OFF (1A) VAPOR) (S) DRYER (P) (RESIDUAL GAS OR TAIL GAS) (P)
 GASIF?

 => s (off (1a) gas or vapor) (s) dryer (p) (residual gas or tail gas) (p) gasif?
 353014 OFF
 2945 OFFS
 355375 OFF
 (OFF OR OFFS)
 1640826 GAS
 542334 GASES
 1830903 GAS
 (GAS OR GASES)
 553387 VAPOR
 73548 VAPORS
 596621 VAPOR
 (VAPOR OR VAPORS)
 14223 DRYER
 3244 DRYERS
 15793 DRYER
 (DRYER OR DRYERS)
 272636 RESIDUAL
 6439 RESIDUALS
 277569 RESIDUAL
 (RESIDUAL OR RESIDUALS)
 1640826 GAS
 542334 GASES
 1830903 GAS
 (GAS OR GASES)
 7249 RESIDUAL GAS
 (RESIDUAL (W) GAS)
 71573 TAIL
 13578 TAILS
 81501 TAIL
 (TAIL OR TAILS)
 1640826 GAS
 542334 GASES
 1830903 GAS
 (GAS OR GASES)
 2258 TAIL GAS
 (TAIL (W) GAS)
 42433 GASIF?
 L2 0 (OFF (1A) GAS OR VAPOR) (S) DRYER (P) (RESIDUAL GAS OR TAIL GAS)
 (P) GASIF?

 => s (recycl? or return? or feed?) (s) (off (1a) gas or vapor or tail gas or
 residual gas) (s) gasif?
 192640 RECYCL?
 131883 RETURN?
 530647 FEED?
 353014 OFF
 2945 OFFS

355375 OFF
(OFF OR OFFS)
1640826 GAS
542334 GASES
1830903 GAS
(GAS OR GASES)
553387 VAPOR
73548 VAPORS
596621 VAPOR
(VAPOR OR VAPORS)
71573 TAIL
13578 TAILS
81501 TAIL
(TAIL OR TAILS)
1640826 GAS
542334 GASES
1830903 GAS
(GAS OR GASES)
2258 TAIL GAS
(TAIL(W) GAS)
272636 RESIDUAL
6439 RESIDUALS
277569 RESIDUAL
(RESIDUAL OR RESIDUALS)
1640826 GAS
542334 GASES
1830903 GAS
(GAS OR GASES)
7249 RESIDUAL GAS
(RESIDUAL(W) GAS)
42433 GASIF?
L3 107 (RECYCL? OR RETURN? OR FEED?) (S) (OFF (1A) GAS OR VAPOR OR TAIL
GAS OR RESIDUAL GAS) (S) GASIF?

=> l3 and dryer

L3 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l3 and dryer

14223 DRYER
3244 DRYERS
15793 DRYER
(DRYER OR DRYERS)

L4 0 L3 AND DRYER

=> s l3 and coal

234986 COAL
37634 COALS
237076 COAL
(COAL OR COALS)

L5 36 L3 AND COAL

=> s l5 and combust?

278049 COMBUST?
L6 9 L5 AND COMBUST?

=> d 16 ibib ab tot

L6 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:97736 CAPLUS
DOCUMENT NUMBER: 146:255036
TITLE: Clean and incremental combustion of solid

INVENTOR(S): fuels such as coal with municipal solid
 wastes and biomass
 Zhou, Kaigen
 PATENT ASSIGNEE(S): Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 18pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1900590	A	20070124	CN 2006-10092937	20060616
PRIORITY APPLN. INFO.:			CN 2006-10092937	20060616
AB	A combustion device for solid fuels is modified for combustion of coal, municipal solid waste, or biomass, and comprises a fuel supply device, a water-vapor introducing device, a gasification combustion chamber, a hearth, an upper water-cooled or air-cooled fire grate, a lower fixed or movable fire grate, an air preheater, a primary and secondary air supply unit, and a high-temperature fuel gas feedback device. The gasification-combustion chamber is quasi-sealed, and comprises a furnace arch, furnace walls or a furnace flue. The bottom of the gasification-combustion chamber is the upper fire grate. The gasification-combustion chamber and the hearth are separated by the fuel layer of the upper fire grate. The coal intake is insulated from the environment by the fuel layer of the fuel supply device. The water-vapor introducing device comprises a water-vapor nozzle or a plasma generator. Solid fuel is preheated in the gasification-combustion chamber, followed by drying, gasification, desulfurization and dechlorination, combustion of volatile substances, and combustion of the fuel layer. The high-temperature flue gas is introduced into the hearth, and the fuel was burned a second time, soot was removed, and water vapor is pumped into the gasification-combustion chamber to inhibit the formation of smoke and to realize clean combustion and incremental combustion.			

L6 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2003:935012 CAPLUS
 DOCUMENT NUMBER: 140:377753
 TITLE: Process and equipment for preparation of water gas in fluidized bed externally installed with subsidiary reactor
 INVENTOR(S): Liu, Dechang; Wang, Mingde; Chen, Hanping; Cheng, Hengxin; Zhang, Shihong
 PATENT ASSIGNEE(S): Zhengzhou Yongtai Energy New Devices Co., Ltd., Peop. Rep. China; Huazhong University of Science and Technology
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 11 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1385500	A	20021218	CN 2002-115830	20020512
PRIORITY APPLN. INFO.:			CN 2002-115830	20020512
AB	The process is characterized in fluidized-bed gasification furnace adopting intermittent gasification method, and in subsidiary reactor adopting intermittent way of air supply or gasification or continuous way of air supply and gasification. The process comprises allowing the			

coal to combust fluidizedly in the fluidized-bed gasification furnace in the presence of air, separating high-temperature flue gas by a cyclone separator, allowing the unconverted powdery coal tar to flow into the subsidiary reactor and to combust with fluidized rate of 0.2- 0.6 m/s, recycling the flue gas and part of ash into the fluidized gasification furnace, discharging the flue after dust removal and cooling; aerating vapor into the fluidized bed gasification furnace to gasify the coal, and collecting coal gas after dust removal and cooling. The vapor can be mixed with air, and aerated into the subsidiary reactor to gasify the coal. The temperature of the subsidiary can be controlled by adjusting the amount of air and vapor. The operating temps. of gasification furnace and subsidiary reactor are 900-1500° and 900-1000°, resp. The equipment consists of fluidized-bed gasification furnace, cyclone separator, spiral stocker, hopper, subsidiary reactor, gasification chamber, wind chamber, ash discharge unit, baiting pipe, etc.

L6 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:379962 CAPLUS
 DOCUMENT NUMBER: 125:38565
 TITLE: Direct reduction of iron ores in melting-gasification furnace with the off-gas treated for recycling
 INVENTOR(S): Carroll, Donegal Harold Victor
 PATENT ASSIGNEE(S): S. Afr.
 SOURCE: S. African, 15 pp.
 CODEN: SFXXAB
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 9406215	A	19950331	ZA 1994-6215	19940817
PRIORITY APPLN. INFO.:			ZA 1994-6215	A 19940817
			ZA 1993-5611	19930803

AB Powdered Fe oxide ore is reduced to feed the Fe sponge to the melting furnace operated with coal gasification, and the CO-containing top gas from the reduction stage is treated to remove the CO₂ and then is recycled to the reduction gas or combusted for addnl. heating. The hot top gas is optionally passed through a compressor, scrubber, and a sep. reduction stage before recycling, and is not vented to the atmospheric

L6 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1988:440657 CAPLUS
 DOCUMENT NUMBER: 109:40657
 TITLE: Underground gasification of coal
 INVENTOR(S): Valukonis, G.; Smachnoi, N. I.; Bashkatov, M. I.; Smaglii, E. V.
 PATENT ASSIGNEE(S): Kommunar Mining-Metallurgical Institute, Stakhanovets, USSR
 SOURCE: U.S.S.R. From: Otkrytiya, Izobret. 1988, (16), 122.
 CODEN: URXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Russian
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1392085	A1	19880430	SU 1986-4106745	19860804
PRIORITY APPLN. INFO.:			SU 1986-4106745	19860804

AB Coal is gasified underground by drilling shafts to the productive zone, creating between the seams a channel, feeding an air-O stream to the combustion front, feeding to the combustion zone with water, withdrawing the vapor-gas mixture. The quality of the vapor-gas mixture is increased while simultaneously the energy consumption is reduced by lowering the CH₄ content, by mixing the water with Ni, Co or Fe or their mixture to form a hydrosol before feeding it to the combustion zone.

L6 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1987:216463 CAPLUS
 DOCUMENT NUMBER: 106:216463
 TITLE: Manufacture of ammonia or methanol
 PATENT ASSIGNEE(S): Foster Wheeler U.S.A. Corp., USA
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62052101	A	19870306	JP 1986-158887	19860708
ZA 8604784	A	19870225	ZA 1986-4784	19860627
EP 217491	A1	19870408	EP 1986-305138	19860702
R: DE, FR, GB, IT				
AU 8660397	A	19870305	AU 1986-60397	19860721
ES 2001259	A6	19880501	ES 1986-1296	19860822
CN 86105431	A	19870318	CN 1986-105431	19860827
PRIORITY APPLN. INFO.: US 1985-770140 A 19850828				

AB Oxidizing gas (e.g., air, O₂) is fed at a feed rate for incomplete combustion of coal into a fluidized granular coal bed to generate synthesis gas containing H₂, N₂, and CH₄ as principal components by coal gasification. The synthesis gas is then treated in a catalytic reactor to form NH₃ from N₂ and H₂. Part of the off gas mainly containing CH₄ is recycled to the fluidized bed and the combustion heat of the CH₄ is utilized for coal gasification. The remaining off gas is used for MeOH manufacture if necessary.

L6 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1986:536948 CAPLUS
 DOCUMENT NUMBER: 105:136948
 ORIGINAL REFERENCE NO.: 105:22063a,22066a
 TITLE: Processing crude condensates in the pressure gasification of solid fuels
 INVENTOR(S): Melichar, Bohuslav
 PATENT ASSIGNEE(S): Czech.
 SOURCE: Czech., 6 pp.
 CODEN: CZXXA9
 DOCUMENT TYPE: Patent
 LANGUAGE: Czech
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 229868	B1	19840716	CS 1982-3939	19820528
PRIORITY APPLN. INFO.: CS 1982-3939 19820528				

AB A process and flow sheet are given for the workup of condensate from the cooling of crude gas. The condensate is fractionated to give a light phase (A), containing tars and oils, and heavy phase (B), containing water, phenols, fatty acids, and NH₃. Phase A is mixed with air or O₂ and

combusted with feeding of phase B into the hot combustion products. The resulting mixture of gases and vapors is recycled into the pressure gasification step.

L6 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1986:482100 CAPLUS
DOCUMENT NUMBER: 105:82100
ORIGINAL REFERENCE NO.: 105:13285a,13288a
TITLE: Integrated coal liquefaction, gasification and electricity production
INVENTOR(S): Cheng, Shang I.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4594140	A	19860610	US 1984-596614	19840404
PRIORITY APPLN. INFO.:			US 1984-596614	19840404

AB A conceptual process integrating coal liquefaction and coal gasification with power generation involves (1) gasification of (optionally) unconverted solids from the liquefaction and other desired fuels, (2) shift conversion of product gases to produce reactant gases for the liquefaction step, (3) liquefaction of coal (or methanation) to produce a liquid fuel (as a byproduct), (4) superheating of the liquefaction (or methanation) tail gas with byproduct high-pressure steam, (5) combustion of the superheated tail gas in a gas turbine for power generation, and (6) recycle of the waste gases (with steam) to the gasification step.

L6 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1977:472973 CAPLUS
DOCUMENT NUMBER: 87:72973
ORIGINAL REFERENCE NO.: 87:11575a,11578a
TITLE: Removal of phenols from waste water
INVENTOR(S): Wiesner, Paul; Stoenner, Hans M.
PATENT ASSIGNEE(S): Metallgesellschaft A.-G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 10 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2527983	A1	19770113	DE 1975-2527983	19750624
ZA 7601504	A	19770330	ZA 1976-1504	19760311
US 4162902	A	19790731	US 1977-838429	19770930
PRIORITY APPLN. INFO.:			DE 1975-2527983	A 19750624
			US 1976-693040	A1 19760604

AB Wastewater from coal gasification is extracted with a low-boiling organic solvent (e.g. iso-Pr₂O), the dissolved solvent in the raffinate removed together with most CO₂ + H₂S, and some NH₃ by distillation under pressure, the vapors washed with small amount of cold raffinate under pressure, a portion of the solvent condensed, separated from the raffinate, and recycled. After pressure decrease, the remaining acidic gas containing CO₂, H₂S, solvent, NH₃, and H₂O is washed with cold raw phenol to remove NH₃ and remaining solvent. The latter is

recovered and recycled. The partially purified raffinate from the pressure column is fed into a NH₃-column where NH₃ with the remaining CO₂ and H₂S are removed, cooled, and used for combustion.

L6 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1959:108140 CAPLUS

DOCUMENT NUMBER: 53:108140

ORIGINAL REFERENCE NO.: 53:19371b-d

TITLE: Pyrolysis and gasification of hydrocarbons

INVENTOR(S): Sweeney, Maxwell P.

PATENT ASSIGNEE(S): United Engineers & Constructors Inc.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2884368		19590428	US 1956-566205	19560217

AB Hydrocarbons are pyrolyzed and (or) gasified by feeding them into a stream of hot gases and entrained finely-divided carbonaceous solids at 1100-1800°F., passing the mixture into a fluidized bed of carbonaceous solids, allowing the vapors to pass off, removing the solids, and splitting them into 2 streams. One portion is burned in a combustion zone to yield hot gases which are then mixed with the 2nd portion of carbonaceous solids for reheating and the gas-solids stream is then used as the reaction stream. The process is applicable to the production of liquid products and coke from petroleum residues and low-value gaseous hydrocarbons, in the gasification and carbonization of coal, lignite, and peat, and in petroleum refining.

WEST Search History

[Hide Items](#) [Restore](#) [Clear](#) [Cancel](#)

DATE: Monday, January 21, 2008

Hide?	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L19	recycl\$3 with (off near1 gas or vapor) same (residual gas or tail gas) same gasification	5
<input type="checkbox"/>	L18	residual gas with vapor with recycl\$3 with gasification	0
<input type="checkbox"/>	L17	L14 and recycl\$3	0
<input type="checkbox"/>	L16	L14 and return\$3	0
<input type="checkbox"/>	L15	L14 and recycl\$3	0
<input type="checkbox"/>	L14	us 20020087037	2
<input type="checkbox"/>	L13	vapor with dryer same (residual gas or tail gas)with gasif\$7	1
<input type="checkbox"/>	L12	l9 and residual gas with gasification	1
<input type="checkbox"/>	L11	l9 and (vapor or off near1 gas)with dry\$3 with gasif\$7	1
<input type="checkbox"/>	L10	coal and dryer and gasification and combustion and electrolysis and methanol	7
<input type="checkbox"/>	L9	coal and dry\$3 and gasification and combustion and electrolysis and methanol	308
<input type="checkbox"/>	L8	coal and dryer and gasification and combustion and electrolysis and (water near2 wash\$3 or water near3 spray\$3)and methanol	0
<input type="checkbox"/>	L7	coal and dryer and gasification and combustion and electrolysis and (water near2 wash\$3 or water near3 spray\$3)and methanol	0
<input type="checkbox"/>	L6	l5 not l3	6
<input type="checkbox"/>	L5	L4 and electrolysis (dryer or drying or drier) same gasif\$7 same combust\$3 and (hydrocarbon or	7
<input type="checkbox"/>	L4	methanol) with (prepar\$5 or mak\$3 or synthesi\$4 or manufactur\$3 or produc\$4)	153
<input type="checkbox"/>	L3	L2 and gasif\$7 and combust\$3 and electrolysis	2
<input type="checkbox"/>	L2	liquid energy carrier	49
<i>DB=PGPB,USPT; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L1	liquid energy carrier	20

END OF SEARCH HISTORY